

Yamaguchi et al. 09/660,888 (A-108 US)

CLEAN VERSION OF CLAIMS:

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Please amend claims 1 and 17 to read as follows:

1. (Amended) A connector for providing a connection between an opposing connector and a circuit board, the opposing connector having an elongated insertion end for mating with the connector, said connector comprising:

an insulative housing supporting a plurality of conductive terminals, the terminals each having contact portions and tail portions, the tail portions extending outwardly and away from the connector housing, the connector housing having a body portion and distinct top and bottom wall portions extending therefrom, the connector housing top and bottom portions being disposed on said body portion to define a space therebetween adapted to receive said opposing connector insertion portion therein, the contact portions of said terminals being disposed in said space and between said top and bottom wall portions, said connector housing not having any sidewalls interconnecting said top and bottom wall portions together such that said connector housing has a generally U-shaped cross-section;

a retainer comprising a metal shield that overlies a portion of said connector housing, the retainer shield having three distinct retention members formed thereon, each of the retention members extending at least partially into said space between said connector housing top and bottom wall portions for engaging opposing portions of said opposing connector inserted into said space, each of said retention members further extending into said space from three different directions; and

an outer metal shell having a plurality of different panel portions, some of which overlie portions of said connector housing, the shell member having a front face panel that extends vertically between said connector housing top and bottom wall portions, two side panels that extend vertically between said connector housing top and bottom wall portions and close off said space therebetween to define a four sided receptacle of said connector, the front face panel having an opening formed therein that communicates with said receptacle, two of said retention members being disposed interiorly of said side panels and the third of said retention members being disposed interiorly of said connector housing top

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wall portion, the metal shield being disposed between the metal shell and the connector housing, the metal shield being retained in its place upon the housing by the metal shell.

17. (Amended) A receptacle connector for providing electrical connection between an opposing plug connector with a circuit board, the opposing connector having an insertion end for mating with the receptacle of said connector, comprising:

an insulative housing, the connector housing supporting a plurality of conductive terminals, the connector housing having distinct top and bottom wall portions defining an interior receptacle in which said terminals are supported, the receptacle being sized to receive said plug connector insertion end when said plug connector is mated to said receptacle connector, the housing not having any sidewalls interconnecting the top and bottom wall portions together;

a retainer shield for shielding a portion of said connector housing and for engaging a plurality of exterior surfaces of said plug connector insertion end, the retainer shield including a body portion that is bent to overlie at least three distinct sides of said connector housing, said retainer shield further including at least two retention members formed therewith and projecting into said connector housing interior receptacle, said two retention members being oriented in distinct vertical and horizontal planes so as to exert a retaining force from two different directions on two different surfaces of said plug connector insertion end when inserted into said receptacle, and

a metal shell extending partially over the retainer shield, the retainer shield being retained in its place upon the housing by the metal shell.

Remarks

In the Office Action mailed on May 22, 2001, the Examiner rejected claims 1-14 and 21 under 35 U.S.C. §103(a) as being unpatentable over Wu et al., U.S. Patent No. 6,086,421 in view of Futatsugi et al., U.S. Patent No. 6,077,120 and Wang, U.S. Patent No. 6,095,869, and rejected claims 17, 18 and 20 under 35 U.S.C. §103(a) as being unpatentable over Futatsugi et al. '120 in view of Matsunuma et al., U.S. Patent No. 5,993,258 and Wang '869. The Examiner also provisionally rejected claims 1-21 under

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the doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of co-pending application 09/660,907 in view of Futatsugi et al. '120.

Claim 1 has been amended to recite that the metal shield is "...disposed between the metal shell and the connector housing, the metal shield being retained in its place upon the housing by the metal shell." Support for this amendment is found in the last part of the first full paragraph of page 5, and also in the last full paragraph on page 5, continuing through to page 6 of the specification.

Also, claim 17 has been amended to recite "...a metal shell covering a portion of the retainer shield, *the retainer shield being retained in its place upon the housing by the metal shell.*" Support for this amendment is found in the last part of the first full paragraph of page 5, and also in the first full paragraph of page 11 of the specification.

The Applicants respectfully submit that amended claims 1 and 17 are unobvious in view of the combination of references suggested by the Examiner because, even if the cited references were to be combined, the resulting combination would not include all of the features recited in the amended claims. No combination of Wu et al. '421, Futatsugi et al. '120 and Wang '869 would include a metal shield "...disposed between the metal shell and the connector housing, the metal shield being retained in its place upon the housing by the metal shell", as recited in amended claim 1. In addition, no combination of Futatsugi et al. '120, Matsunuma et al. '258 and Wang '869 would include "...a metal shell covering a portion of the retainer shield, the retainer shield being retained in its place upon the housing by the metal shell", as recited in amended claim 17. The rear shield member 70 in Futatsugi et al. '120 is not retained upon the housing by the forward shield member 40. Similarly, forward shield member 40 is not retained upon the housing by rear shield member 70.

With regard to the claim rejections under 35 U.S.C. §103(a), the Applicants respectfully submit that claim 21 is unobvious in view of any combination of the cited references because there is no suggestion in either of the cited references that they be combined in a manner required to meet claim 21. The Examiner cites no specific passage in either Wu et al. '412 or Futatsugi et al. '120 suggesting that the references be

combined to provide a retainer having "...three distinct retention members formed therewith, each of the retention members extending at least partially into said receptacle for engaging an opposing portion of said opposing connector inserted into said receptacle, each of said retention members further extending into said receptacle from three different directions...", as recited in claim 21.

In addition, the Applicants respectfully submit that claim 21 is unobvious in view of any combination of the cited references because this claim recites features that are neither shown nor suggested in either Wu et al. '421 or Futatsugi et al. '120. The Examiner suggests that Wu et al. '421 teaches the use of retention members (322) having free ends and extending sideways. However, the features cited by the Examiner as being "retention members" in Wu et al. '421 are actually *grounding members* for contacting a surface of a structure to which the connector is mated. As stated in column 2, lines 57-61 of Wu et al. '421:

"Additionally, the front face section 32 of the conductive shield 3 may have a pair of *grounding wings* 322, 322' bent to extend forwardly and outwardly *to contact for example a computer panel* (not shown)." (emphasis added)

Thus, neither Wu et al. '421 nor Futatsugi et al. '120 show or suggest a retainer incorporating "...three *retention members*extending from three different directions...", as recited in claim 21. Thus, the Applicants respectfully submit that claim 21 is unobvious in view of any combination of Wu et al. '421, Futatsugi et al. '120 and Wang '869.

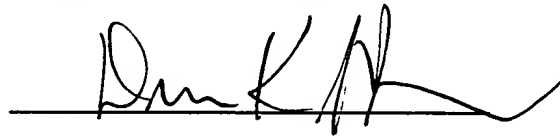
For the reasons stated above, the Applicants respectfully submit that amended claim 1 is unobvious in view of any combination of Wu et al. '421, Futatsugi et al. '120 and Wang '869. As amended claim 1 is believed to be patentable over the cited references, it is submitted that claims 2-16 are also patentable as they depend from amended claim 1. Also, for the reasons stated above, the Applicants also respectfully submit that amended claim 17 is unobvious in view of any combination of Futatsugi et al. '120, Matsunuma et al. '258 and Wang '869. As amended claim 17 is believed to be

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patentable over the cited references, it is submitted that claims 18-20 are also
patentable as they depend from amended claim 17.

With respect to the provisional obviousness-type double patenting rejection, the Applicants respectfully submit that, as the rejection is provisional, Applicants will submit a terminal disclaimer to obviate the rejection upon the indication of allowable subject matter in one or the other of the two applications.

In view of the above amendments and remarks, the Applicants respectfully submit that all rejections of record have been overcome. The Applicants respectfully request favorable reconsideration and allowance of the present application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Dennis K. Scheer', is written over a horizontal line.

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